

Application No. 10/601,007
Filed: June 20, 2003
TC Art Unit: 1744
Confirmation No.: 5771

REMARKS

Claims 7-13, 29, and 33 are currently pending. Claims 7-13, 29, and 33 stand rejected under 35 U.S.C. § 103(a). Claim 1 has been amended. No new matter has been added.

The Applicants respectfully traverse the rejections in view of the above amendments and for the reasons provided below.

SECTION 103(a) REJECTIONS

Claims 7-9, 12, and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Number 3,383,163 to Menashi ("Menashi") in view of U.S. Patent Application Publication Number 200400377266 to Perruchot ("Perruchot"); claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Menashi, in view of Perruchot, further in view of U.S. Patent Number 3,819,985 to Dusevoir ("Dusevoir"); claim 13 stands rejected under § 103(a) as being unpatentable over Menashi, in view of Perruchot, further in view of International Publication WO 97/22369 to Vavilin, et al. ("Vavilin"); and claim 33 stands rejected under § 103(a) as being unpatentable over Menashi, in view of Perruchot, Dusevoir, and Vavilin. The Applicants respectfully traverse the rejections.

Claims 7-9, 12, and 29

Menashi teaches a method of sterilizing the surface of a material using a plasma of ionized gas that is created by

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providing a voltage gradient between a coil (18), i.e., "a discharge side electrode", and an electrode point (24), i.e., "a ground side electrode". As shown in FIGs. 1-6 of Menashi, however, the discharge side electrode (18) is disposed outside of the envelope (15), jar (34), bottle (29), and so forth. Consequently, according to Menashi, the surface being sterilized is disposed opposite the ground side electrode. Hence, Menashi teaches away from disposing the discharge side electrode opposite the surface to be sterilized as presently claimed.

The Examiner concedes that Menashi does not teach, mention or suggest disposing water or an aqueous solution on the surface of the packaging material to be sterilized before and/or during discharge, relying on Perruchot as teaching supplying the gas with water vapor before ionization to provide a plasma. More particularly, according to the Examiner, "The resulting humidification of the gas provides a higher humidity in the vicinity of the article which results in shorter sterilization times * * *. Although not specifically recited, the water vapor present in the plasma forming gas . . . will cloud the surface of the article being treated when the humidified gas is introduced to the article." (Emphasis added). In short, although conceding that Perruchot is silent about applying water to the surface to be sterilized, the Examiner maintains that the water vapor would inherently cloud the surface to be sterilized. The Applicants respectfully disagree.

Moreover, the Examiner's position is not supported by the Perruchot disclosure. By definition, humidity refers to amount of water vapor that is retained in the air. Thus, the "water vapor" itself is in a non-aqueous state which is not the same as that of

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"water"; and the "water vapor" is retained in the air, hence, it cannot also be on the surface to be sterilized. Water vapor "may" condense on the surface if there is a temperature gradient between the surface and the plasma. Neither condensation nor uniform condensation is guaranteed or will inherently occur!

Furthermore, Perruchot discloses that "there is no need to moisten articles or to give rise to uniform condensation: the article and the humidifier can remain at the same temperature." U.S. Patent Application Publication Number 2004/0037736, para. [0079] (Emphasis added). Hence, Perruchot teaches away from the need to apply water or an aqueous solution uniformly to the surface to be sterilized and the Examiner's position is unsupportable.

Perruchot further teaches that "The article to be treated is placed outside the space where discharge occurs . . ." Id., para. [0046] (Emphasis added). Moreover, the article (20) in Perruchot FIG. 2 is not disposed opposite the discharge side electrode (24) nor is it between the ground side electrode (28) and the discharge side electrode (28) as recited in claim 7.

Even if one were to combine Perruchot with Menashi as the Examiner suggests, because Menashi teaches disposing the discharge side electrode not only outside of the envelope (15), jar (34), bottle (29), etc. but also away from the surface being sterilized, the location of the discharge side electrode (so far from the water) would be self-defeating. Arguably, applying water or an aqueous solution to a surface so far away from the discharge side electrode would not have the desired effect as when, as presently claimed, the discharge side electrode is disposed directly opposite the wetted surface being sterilized.

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Accordingly, the Applicants maintain that claim 7 and all claims depending therefrom satisfy 35 U.S.C. § 101, et seq., especially § 103(a), and are in condition for allowance. Withdrawal of the rejections is respectfully requested.

Claim 11

The deficiencies of the Menashi and Perruchot references have been described above. Nor can the Dusevoir reference make up for the deficiencies of the Menashi and Perruchot references. Dusevoir does not teach, mention or suggest a method in which a discharge side electrode and a ground side electrode are disposed on either side of a surface to be sanitized; with the discharge side electrode further disposed opposite the surface being sanitized; and/or wetting the surface with water or an aqueous solution.

Accordingly, the Applicants maintain that claim 11 satisfies 35 U.S.C. § 101, et seq., especially § 103(a), and is in condition for allowance. Withdrawal of the rejection is respectfully requested.

Claim 13

The deficiencies of the Menashi and Perruchot references have been described above. Nor can the Vavilin reference make up for the deficiencies of the Menashi and Perruchot references. Vavilin does not teach, mention or suggest a method in which the discharge side electrode and a ground side electrode are disposed on either side of a surface to be sanitized; with the discharge side electrode further disposed opposite the surface being sanitized; and/or wetting the surface with water or an aqueous solution.

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Accordingly, the Applicants maintain that claim 13 satisfies 35 U.S.C. § 101, et seq., especially § 103(a), and is in condition for allowance. Withdrawal of the rejection is respectfully requested.

Claim 33

The deficiencies of the Menashi, Perruchot, Dusevoir and Vavilin references have been described above. Accordingly, the Applicants maintain that claim 33 satisfies 35 U.S.C. § 101, et seq., especially § 103(a), and is in condition for allowance. Withdrawal of the rejection is respectfully requested.

The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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